

Understanding Transfer Success Revisited:
Transfer Students – Who are They and How Successful are They?

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At a large university system, two questions were addressed: 1) What characteristics help explain a transfer student's likelihood of graduating? And 2) Are transfer students more likely to graduate than first-time freshmen, when controlling for ability? Findings indicate that attending one of the residential campuses and transfer GPA were positively associated with graduating; being a minority student was negatively associated with graduating (N=11,150). Additionally, when GPA and credit hours were controlled, first-time freshmen (N=16,936) graduated at a higher rate than transfer students. These results validate an earlier study and are discussed in terms of how they affect the institution's transfer policies.

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At one multi-campus research university system in the Midwest, the percentage of transfer students entering the institution comprises of nearly forty percent of all new students (Table 1). However, as admission standards for first-time freshmen have increased three times in the past 15 years, standards for transfer students have remained the same. Consequently, this research paper describes how one institution examined transfer students and related admission policies. More specifically, two questions were addressed: What characteristics help explain a transfer student's likelihood of graduating? And are transfer students more likely to graduate than first-time freshmen, when controlling for student ability? Based on this research, policies and procedures concerning transfer students can be reassessed in relation to the institution's overall enrollment management plan.

Background

In 1997, a study completed at the present university system found that the best predictors of graduation among students who transferred to the university in 1987 and 1988 were transfer GPA and having enrolled at the engineering campus (Eimers & Mullen, 1997). In addition, minority students who transferred were less likely to graduate than white or Asian-American students. When credit hours and GPA were held constant, the earlier study also found that first-time freshmen were generally more likely to graduate than transfer students. Carlan and Byxbe (2000) controlled for a host of variables and noted that community college transfer students who enrolled at a four-year institution displayed lower than predicted GPAs in the first semester. However, those GPAs improved to predicted levels in subsequent semesters. This research also found that the best predictors of upper division GPA for community college transfers were lower division GPA and choice of major (those majoring in education and psychology did as predicted; those in science and business did worse than predicted) at the four-year institution. Controlling for several key variables, Porter (1999) compared transfer students and native students at a major research university and concluded that transfer students did more poorly than native students in one-year retention, one-year graduation, cumulative GPA, and academic dismissals. Other studies found that transfer grade point average (Townsend, McNerny, & Arnold, 1993; Saupe, 1994) and transfer hours (Saupe, 1994) were variables associated with persistence and graduation of transfer students.

Research Questions and Methodology

Two research questions were central to this study. They were: 1) What characteristics help explain a transfer student's likelihood of graduating? and 2) Are transfer students more likely to graduate than first-time freshmen, when controlling for student ability? The importance of this study is twofold. Addressing these questions was not only necessary in order to evaluate the institution's admission policy for transfer students but was also critical to the development of a comprehensive enrollment management plan. Second, this study highlights the importance of understanding the role of transfer students

at all institutions and suggests that the findings of this study may have implications for similar institutions.

In order to address the first question, logistic regression, was used to determine which student characteristics helped to predict a transfer student's likelihood of success, defined as graduation. Logistic regression enables one to develop a model using explanatory variables to predict a dichotomous dependent variable, in this case whether or not the student graduated. Student characteristics analyzed included the discipline of the degree sought or awarded (agriculture, business, education, liberal arts, science, social sciences, or other), where the student transferred from (internal to system, foreign or in- or out-state school), whether the student transferred from a two- or four-year institution, whether or not the student transferred in with an associate's degree, which of the four campuses the student transferred to, and the student's sex, age, ethnicity (minority, Asian, or other), transfer GPA, and transfer hours. The study population included all degree-seeking, full-time transfer students to one of the campuses in the system (including internal, intra-system transfers) during the fall terms of 1991 through 1994. To be included in the study, the transfer student must have earned at least 24 or more credit hours before transferring; this gave a total population of 11,150.

To address the second research question, first-time freshmen who entered the university during the fall terms 1991 through 1994 were identified. Then, these first-time freshmen were tracked until they had finished their third semester. From this population we only included students that had earned 24 credit hours or more, giving us a total of 16,936 students. The number of credit hours and overall GPA at that point were used and compared to transfer students who entered the university with like credit hours and GPA's. The fall 1991 through 1994 cohorts were used so that students had a reasonable number of years to graduate (six years in this case).

Results

The average age of those transferring to the university was 21.9 years (Table 2); fifty percent of all transfer students came from two-year institutions (Table 3). The average number of credit hours transferred was 56.2, the average entering GPA was 2.8 (4.0 scale), and one of six students transferred to the university with an associate's degree in hand (Tables 4 and 5). Nearly 54% of all transfer students who entered the university graduated in six years or less (Table 6), and transfer students who graduated from the university, on average, took 2.9 years (Table 7). The majority of transfer students who left the university did so in the first year (Table 8). Fifty-four percent (54%) of white, non-Hispanic graduated while 60% of Asian-American and 40% of minority students graduated (Table 9).

In terms of the first research question, five explanatory variables were statistically significant ($p < .01$) and positive: transferring to UMR (point estimate = 2.76), the student's transfer GPA (p. est. = 1.39), transferring to UMC (p. est. = 1.30), being female (p. est. = 1.26) and the number of transfer hours (p. est. = 1.01). Further, four explanatory variables were statistically significant ($p < .01$) and negative: being of minority status (p. est. = .59), majoring in a science-related field (p. est. = .60), transferring from an

institution in Missouri (p. est. = .75), majoring in other discipline (p. est. = .86), and having an associate's degree (p. est. = .87). Point estimates can be interpreted in the following manner. Holding things constant, for example, transfer students who enrolled at the engineering campus were 1.76 times more likely to graduate ($2.76 - 1.0 = 1.76$ or 176%) than transfer students at the other campuses. Or, holding everything constant, having an associate's degree decreased your likelihood of graduating from one of the campuses by 13% ($1.0 - 0.87 = .13$).

In terms of the second research question, we compared the graduation rates of both transfers and first-time freshmen who had like GPAs and number of credit hours. Recall that for transfer students, we looked at their GPA and number of credit hours at the time that they transferred to the university. For the first-time freshmen, we looked at their GPA and accumulated credit hours at the end of their third semester at the university. Students were placed into cells based on their GPA and number of credit hours secured. There were four credit hour categories (24-35, 36-47, 48-59, and 60 credit hours or above) and four GPA categories (less than a 2.5, 2.5 to 3.0, 3.0 to 3.5, and 3.5 and above). The result was a 4 by 4 matrix consisting of 16 cells (Table 11). For the students in each cell, we then compared the graduation rates for the transfer students to the first-time freshmen. For example, for students who had a GPA between 2.5 and 3.0 and credit hours of between 24 and 35, 60% of the first-time freshmen graduated and 48% of the transfer students graduated. Overall, when we controlled credit hours and GPA as described above, first-time freshmen (examined after their third semester at the University) were more likely to graduate than students who transferred in 15 of the 16 cells examined.

Discussion and Implications

At least four findings of this study have important implications for current policies and programs concerning transfer students. First, much research and institutional resources have concerned themselves with the assimilation of the traditional first-time freshmen student at the present institution. This research, however, has highlighted the need to further investigate and focus on the assimilation of transfer students, especially transfer students of minority status and those who major in the sciences. In fact, the findings of this study mirror findings that have focused on first-time freshmen retention (Eimers & Pike, 1997). That is, social and academic integration tend to be particularly important for minority student persistence. Implications suggest that it may be important to develop orientation programs that address some of the unique concerns of transferring minority students and possibly for those students who plan to major in the sciences. In the study conducted five years earlier by the authors, minority students who transferred were also less likely to graduate from the institution.

Because of articulation agreements and programs at two-year colleges that assist students to transfer, it might be expected that students from two-year colleges would have a higher likelihood of succeeding than students from four-year colleges. Interestingly, the findings of this study suggest that a student who transferred from a two-year or four-year institution made relatively little difference in his or her likelihood of graduating. On the other hand, students who had secured an associate's degree before transferring to the

university were less likely to graduate than those students who did not hold the degree. Although this finding is somewhat surprising, the robust economy of the late 1990s may have lured enrolled community college graduates from their pursuit of a bachelor's degree.

In recent years first-time freshmen admission standards have increased while the admissions standards for transfer students had remained essentially the same. This has raised concern that transfer students may not be as likely to graduate as students who were accepted under first-time freshmen standards. Based on the finding that graduation rates of transfer students are generally lower than graduation rates of first-time freshmen, these concerns appear to be legitimate. In fact, compared to the previously mentioned study at the same university-not only has the earlier study been validated, but the success gap tends to be widening. This finding may very well stimulate discussions as to whether the admission policy for transfer students needs to be more in-line with first-time freshmen standards.

In light of this evidence, however, the model explained relatively little "variance" in a transfer student's success. That is, although the overall logistic regression model was statistically significant, the point estimates were modest at best. Thus, two implications are warranted. First, it reinforces the importance of collecting additional information about transfer students before the institution revises the transfer student admission policy. Second, it complicates an institution's ability to develop an admissions policy for transfer students based on the entering characteristics that are typically used. At the present institution the relative weakness of the overall model has stimulated administrators to search for additional admissions criteria that might more effectively predict transfer student success. These findings suggest that other institutions may also want to re-consider transfer admissions policies that rely disproportionately on transfer GPA. This study has enhanced what is known about transfer students and what indicators help predict their likelihood of graduating. Similar studies can, as they have here, help stimulate interest and reinforce the importance of the transfer function within a well-developed recruiting, admissions, and retention plan. This is especially true at a time when college and university administrators wrestle with enrollment management issues, particularly at institutions where transfer students are a significant source of new students.

References

- Eimers, M.T., & Mullen, R.W. (1997). Transfer Students: Who are They and How Successful Are They? *College and University*, Winter, 9-19.
- Carlan, P.E., & Byxbe, F.R. (2000). Community Colleges under the Microscope: An Analysis of Performance Predictors for Native and Transfer Students. *Community College Review*, 28(2), 27-42.
- Eimers, M., & Pike, G. (1997). "Minority and Non-minority Adjustment to College: Similarities or Differences?" *Research in Higher Education*, 38(1), 77-98.

Porter, S.R. (1999). *Assessing Transfer and Native Student Performance at Four-Year Institutions*. Paper presented at the Association for Institutional Research 1999 Annual Meeting, Seattle, Washington, May 30-June 2.

Saupe, J. (1994). "Persistence and Graduation Rates of Undergraduate Transfer Students Compared to Native Students." Office of Admissions and Registration: University of Missouri-Columbia.

Townsend, B. K., N. McNerny, & A. Arnold (1993). "Will this Community College Transfer Student Succeed? Factors Affecting Transfer Student Performance." *Community College Journal of Research and Practice*, 17, 433-443.